PUGACHEV, B. P. (Voronezh)

Note on the analysis of certain iterative processes. Zhur.
vych. mat. i mat. fiz. 2 no.5:912-915 S-O '62.
(MIRA 16:1)

(Sequences(Mathematics))

PUGACHEV, B. P.

PUGACHEV, B. P.: "Certain methods of approximate calculation of na-
tural values and natural vectors." Voronezh State U. Voronezh, 1956.
(Dissertation for the Degree of Candidate in Physicomathematical
Sciences.)

SO: Knizhnaya Letopis', No. 26, 1956

PUGACHEV, B.P. (Voronezh)

Speeding up the convergence of second-order iterative processes.
Zhur.vych.mat.i mat.fiz. 2 no.4:703-705 Jl-Ag '62. (MIRA 15:8)
(Convergence)   (Linear equations)

PUGACHEV, B.P.

On an inaccuracy in handbooks on mathematical analysis. Usp. mat.
nauk 19 no.5;234 S-O '64.   (MIRA 17:11)

PUGACHEV, B.P. (Voronezh)

Approximate computation of eigenvectors. Zhur. vych. mat. i
mat. fiz. 4 no.2:340-343 Mr-Ap '64,   (MIRA 17:7)

ACCESSION NR: AP4024566   S/0208/64/004/002/0340/0343

AUTHOR: Pugachev, B. P. (Voronezh)

TITLE: Approximate computation of eigenvectors

SOURCE: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 4, no. 2, 1964, 340-343

TOPIC TAGS: eigenvector, eigenvalue, steepest descent method, linear algebra, self-adjoint operator

ABSTRACT: A method is described for the solution of equation

$$Ax - \lambda x = 0 ,$$

where A is a linear self-adjoint operator defined in a Hilbert space. The upper bound of the spectrum is assumed to be a simple isolated point of the spectrum. If a given vector x_0 is near the eigenvector corresponding to this point, then there are several ways of solving the equation. These methods usually require the

Card 1/2

ACCESSION NR: AP4024566

solution of an equation for its largest root. However, this can be avoided if more use is made of the nearness of the vector x_0 to the desired eigenvector. In the presented method, solutions are sought in the form $x = x_0 + h$, where $||x_0|| = 1$ and $(x_0 ; h) = 0$. This leads to a system of linear equations. The well known formula of Kantorovich for the one-step method of steepest descent is obtained as a special case. Orig. art. has: 27 equations.

ASSOCIATON: none

SUBMITTED: 22Jan63   DATE ACQ: 16Apr64   ENCL: 00

SUB CODE: MM   NO REF SOV: 004   OTHER: 000

.Card 2/2

PUCACHEV, B. P.

Kostarčuk, V. N.; and Pugačev, B. P. Exact estimation
of decrease of error in one step of the method of quickest
descent. Voronež. Gos. Univ. Trudy Sem. Funkcional.
Anal. no. 2 (1956), 25-30. (Russian)

PUGACHEV, B.P

SUBJECT   USSR/MATHEMATICS/Functional analysis   CARD 1/3   PG - 555
AUTHOR   PUGAČEV B.P.
TITLE   On two methods for the approximative computation of eigenvalues
            and eigenvectors.
PERIODICAL Doklady Akad.Nauk 110, 334-337 (1956)
            reviewed 1/1957

Let A be a positive definite bounded selfadjoint operator in the real Hilbert
space H. Let λ_1 and λ_n $(0 < \lambda_1 < \lambda_n)$ be the limits of the spectrum of A.

In a seminary on functional analysis Krasnosel'skij has proposed to determine
λ_1 as limit value of the number sequence

(1)
$$\mu_k = \frac{(Ax_k, x_k)}{(x_k, x_k)},$$

where the vectors x_k are fixed either by

(2)
$$x_{k+1} = x_k - \frac{(\Delta_k, \Delta_k)}{(A\Delta_k, \Delta_k)} \Delta_k \qquad \Delta_k = Ax_k - \mu_k x_k$$

or by

(3) $$x_{k+1} = x_k - 2 \frac{(\Delta_k, \Delta_k)}{(A \Delta_k, \Delta_k)} \Delta_k .$$

The author investigates both methods [(2) and (3)] and formulates some results: 1) $\mu_0 \geqslant \mu_1 \geqslant \mu_2 \geqslant \ldots$, 2) Let E_λ be the spectral function of A.

For every $\varepsilon > 0$ be $\|E_{\lambda_1 + \varepsilon} x_0\| > 0$. Then $\lim\limits_{k \to \infty} \mu_k = \lambda_1$; $\lim\limits_{k \to \infty} \|Ax_k - \lambda_1 x_k\| = 0$.

3) Let λ_1 be an isolated point of the spectrum of A, let the remainder of the spectrum lie on $[\lambda_2, \lambda_n]$. Let H_1 be the space of eigenvectors which correspond to λ_1, let H_2 be the orthogonal complement of H_1. Let e be the orthogonal normalized projection of x_0 onto H_1. If then $x_0 \bar{\in} H_2$, then

$\lim\limits_{k \to \infty} \sin(x_k; e) = 0$. 4) Let the conditions of 3) be satisfied, let x_k be determined according to (2). Then to every $\varepsilon > 0$ a number n can be chosen

Doklady Akad.Nauk <u>110,</u> 334-337 (1956)   CARD 3/3   PG - 555

such that for all $k > 0$ holds: $\mu_{n+k} - \lambda_1 \leq (q + \varepsilon)^k (\mu_n - \lambda_1)$ and

$\sin(x_{n+k};e) \leq (q+\varepsilon)^{\frac{k}{2}} \sqrt{\dfrac{\mu_n - \lambda_1}{\lambda_2 - \lambda_1}}$, where $q = \dfrac{\lambda_1}{\lambda_2}$ for $\lambda_1 \geq \lambda_n - \lambda_2$ and

$q = \dfrac{(\lambda_n - \lambda_2 + \lambda_1)^2 + 4\lambda_1(\lambda_2 - \lambda_1)}{(\lambda_n + \lambda_2 - \lambda_1)^2}$ for $\lambda_1 \leq \lambda_n - \lambda_2$. 5) Let the conditions

of 3) be satisfied and let x_k be determined according to (3). Then to every

$\varepsilon > 0$ there exists an n such that for $k > 0$: $\sin(x_{n+k};e) \leq (q+\varepsilon)^k \sin(x_n;e)$,

where $q < 1$ and independent of ε. Some further results relate to positive
definite quadratic symmetric matrices A.

INSTITUTION: Voroneź.

D'YACHENKO, C.' .; PUGACHEV, B.P.

Using electronic computers in mathematical investigation of the
injection process in diesel engines. Trudy LPI no.249:5-11 '65.
(MIRA 18:9)

PUGACHEV, B. P.

> One method of approximate calculation of eigenvalues and vectors.
> Trudy Sem.po funk.anal. no.3/4:81-97 '60.   (MIRA 14:10)
> (Eigenvalues) (Vector analysis) (Approximate computation)

PUGACHEV, B.P.

Rapidity of convergence in the method of normal chords. Trudy
Sem.po funk.anal. no.3/4:77-80 :60.   (MIRA 14:10)
          (Convergence)   (Functional analysis)

L 29111-65   EWT(d)   Pg-4   IJP(c)

ACCESSION NR: AR4043410   S /0044/64/000/0^{..}7/B105/B105

SOURCE: Ref. zh. Matematika, Abs. 7B572

AUTHOR: Pugachev, B.P.

TITLE: The convergence of methods locally close to the Newton-Kantorovich method

CITED SOURCE: Tr. Seminara po funkts. analizu. Voronezhsk. un-t, vy*p. 7, 1963, 130-136

TOPIC TAGS: Newton method, the Newton Kantorovich method, functional analysis, steepest descent method, iteration method

TRANSLATION: The author discusses the equation

$$P(x) = 0 \qquad (1)$$

with a nonlinear differentiable operator P in a Banach space E. This equation is solved by iterations found by approximate solution of the linearized equation

$$P'(x_i)x_{i+1} = P'(x_i)x_i - Px_i \quad (i = 0, 1, 2, \ldots) \qquad (2)$$

Card 1/3

L 29111-65

ACCESSION NR: AR4043410

O

with the same method used in each step. Because such a method was selected, the computation formulas for computing the approximate solution x_{i+1} for equation (2) and estimating the distance between x_{i+1} and the exact solution x^*_i of the same equation depend on x_i. During investigation of the problem, therefore, in addition to the given norm $\|x\|$ for vectors $x \in E$, the author introduces a local norm $\|x\|_z$ depending on the selection of a point z (in some ball S with center at the solution x^* of equation (1)), equation (2), and the method selected for solving it. The local norm $\|x\|_z$ has, with respect to x, the usual properties of norms, is uniformly continuous with respect to $z \in S$ (i.e.,

$$\left| \|x\|_{z_1} - \|x\|_{z_i} \right| \leqslant \varphi(|z_i - z_1|)\|x\|_i$$

where $\varphi(t) \to 0$ as $t \to 0$), and is comparable to the norm $\|x\|$ (i.e., $m\|x\| \leqslant \|x\|_z \leqslant M\|x\|$ for all $x \in E$ and $z \in S$, where $m > 0$). A method of solving equation (2) is said to be locally close to the Newton-Kantorovich method if $\|x_{i+1} - x_i^*\|_{z_i} < q\|x_i - x_i^*\|_{z_i}$ $(0 < q < 1)$, and $x_1 \in S$.

The author proves the following

Theorem. Let the operator P be twice continuously differentiable in S and assume that there exists a uniformly bounded inverse $[P'(x)]^{-1}$ in S. Then there exists

Card 2/3

L 29111-65

ACCESSION NR: AR4043410 O

a ball S_0 with center at x* such that the sequence of iterations obtained from
(2) for any $x_0 \in S_0$ with a method locally close to the Newton-Kantorovich method
converges to the solution x* of equation (1).

The author gives examples of iterations obtained with methods that are locally
close to the Newton-Kantorovich method and such that convergence to the solution
x* of equation (1) is ensured by the above theorem. Assume, for example, that A
is an operator or scalar such that $\|I - A^{-1}P'(x)\| < q < 1$ for all x in a ball S with
center at x*; instead of equation (2), we take a similar equation

$$Ax_{i+1} - Ax_i - Px_i \quad (i = 0,1,2, ...)$$

and discuss its solution as successive iterations; then $\|x_{i+1} - x^*\| < q \|x_i - x^*\|$ and,
consequently, we obtain, when we set $\|x\|z = \|x\|$, a method locally close to the
Newton-Kantorovich method. When W is a Hilbert space, approximate solutions for
equation (2) can be obtained with methods of the steepest descent type (the
requisite formulas are derived).   S. Krachkovskiy.

SUB CODE: MA   ENCL: 00

Card 3/3

PUGACHEV, B. V., Cand Tech Sci -- (diss) "Analysis of operation

and ~~basis of evaluation~~ and construction of artificial foun-

dations of metall airfield coverings." Mos, 1957. 15 pp (Min

of Higher Education, Mos Motor Vehicle and Road Inst) (KL, 15-58,

116)

- 44 -

MARKOV, Lev Alekseyevich, kand. tekhn. nauk; PARFENOV, Anatoliy
Pavlovich, inzh.; PUGACHEV, Boris Vasil'yevich, kand.
tekhn. nauk; CHERKASOV, Igor' Ivanovich, doktor tekhn.
nauk, prof.; YEGOZOV, V.P., red.; BODANOVA, A.P., tekhn.
red.

[Improving soil properties by the use of surface active
agents and aggregating materials] Uluchshenie svoistv
gruntov poverkhnostnoaktivnymi i strukturoobrazuiushchimi
veshchestvami. Pod red. I.I.Cherkasova. Moskva, Avto-
transizdat, 1963. 175 p.   (MIRA 16:6)
      (Soil stabilization) (Road construction)

SOV/124-58-7-8062 D

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 7, ;   'JSSR)

AUTHOR: Pugachev, B. V.

TITLE: An Analysis of the Working and Principles Involved in the Cal-
           culation and Design of Fabricated Foundations for the Metal
           Coverings Used to Surface Airports (Analiz raboty i printsipy
           rascheta i konstruirovaniya iskustvennykh osnovaniy metal-
           licheskikh aerodromnykh pokrytiy)

ABSTRACT: Bibliographic entry on the author's dissertation for the de-
           gree of Candidate of Technical Sciences, presented to the Mosk.
           avtomob. - dor. in-t (Moscow Highway Institute), Mos<sub>ow, 1957

ASSOCIATION: Mosk. avtomob. - dor. in-t (Moscow Highway Institute),
             Moscow

           1. Landing fields--Equipment   2. Landing mats--Design

Card 1/1

NIKOLAYEV, A.G.,inzh.; RYABOV, Z.I.,inzh.; CHERNOGRUD, P.G.,inzh.;
     PUGACHEV, D.K.,inzh.

     Improving the surface quality of rimmed steel ingots. Stal'
     12 no.2:123-124 F '59.   (MIRA 12:2)

     1. Magnitogorskiy metallurgicheskiy kombinat.
             (Steel ingots)   (Surfaces (Technology))
                 (Metallurgical plants--Quality control)

Pucachev, D.K.

PA - 2375

AUTHOR: PUGACHEV, D.K.

ABSTRACT: The investigations were carried out in basic open hearth steel
               furnaces of 300 t and at a depth of the tub of 1300 mm. A platin-
               orhodium-platinum thermoelectric couple served as primary measuring
               apparatus and a steady electron potentiometer EP-127 was used as
               secondary measuring apparatus. The application of the thermoelectric
               couple made it possible to determine the rules governing the
               temperature modification for liquid steel during the period of
               quiescence and the pouring of open hearth steel melt as well as
               to determine the optimum temperature values of the metal before
               deoxidation for various types of steel such as are produced in large
               open hearth steel furnaces. Transition to tapping with optimum
               temperature in the course of pouring through two stopper nozzles
               and a bucket with a diameter of 30 mm in the case of boiling steel
               decreased the not fully topping up at the initial stage of pouring
               by from 0,3 to 0,9%; in the case of quiet steel waste caused by
               cracks was lower by 0,7% at a simultaneous increase of useful metal
               of from 0,3 to 1,0 %. The temperature of quiet steel stays constant

Card 1/2

PA - 2375

The Investigation of Molten Steel Temperature.

or drops by about 5 to 10° but increases by about 15 to 25° in the case of boiling steels.   (3 tables and 4 illustrations).

ASSOCIATION: Metallurgical Combine of Magnitogorsk,
PRESENTED BY:
SUBMITTED:
AVAILABLE: Library of Congress.
Card 2/2

SOV/133-59-2-7/26

AUTHORS: Nikolayev, A.G., Ryabov, Z.I., Chernogrid, P.G. and Pugachev, D.K.   Engineers

TITLE: An Improvement in the Surface Quality of Rimming Steel Ingots (Uluchsheniye kachestva poverkhnosti kipyashchego slitka)

PERIODICAL: Stal', 1959, Nr 2, pp 123-124 (USSR)

ABSTRACT: One of the main defects of rimming steel ingots on the Magnitogorsk Works were surface films. On the proposal of F.D. Voronov (engineer) filling of the ingot moulds fitted with sleeves was tested. Cylindrical (dia 400 mm) and rectangular (500 x 600 mm) sleeves up to 710 mm high made from sheets from 0.5 to 1.5 mm thick were tested. As a first step the solubility of the sleeves in the steel was tested. It was found that complete solution of the sleeves is obtained if they are made from sheets up to 1 mm thick. The effectiveness of the application of sleeves was tested by tapping heats into two ladles and teeming one ladle into moulds (7 ton) with sleeves and the other ladle into moulds without sleeves. The ingots obtained were rolled into slabs and their surface quality was evaluated on the basis of the productivity of slab

Card 1/2

SOV/133-59-2-7/26

An Improvement in the Surface Quality of Rimming Steel Ingots

dressing (tons per shift). The results obtained (Table 1 and 2) indicated that the use of sleeves decreased the amount of dressing required by a factor of 1.3 . The overall economy obtained amounted to 0.45 – 0.35 roubles/ton of steel. There is 1 figure and 2 tables.

ASSOCIATION: Magnitogorskiy Metallurgicheskiy Kombinat
(Magnitogorsk Metallurgical Combine)

Card 2/2

PUGACHEV, D.K., inzh.

Smelting SV10G2 steel. Biul. TSNIICHM no.1:9-11 '58. (MIRA 11:5)
(Steel--Metallurgy)

PUGACHEV, D.K.

Investigating the temperature of molten steel. Stal' 17 no.1:30-34
Ja '57.   (MLRA 10:3)

1. Magnitogorskiy metallurgicheskiy kombinat.
        (Steel--Metallurgy)

PROCESSES AND PROPERTIES

Corrosion of metals during chlorination of toluene. Z. N. Sirkin and R. K. Pugachev. *Antimotion is best* Cr, monel, Fe-Cr, Cr steel, alenite, Pb, Pb-Fe, Pb-Sb; considerable formation of tarry products is observed in all cases except those of Pb, monel and Fe-Cr.   B. C. A.

ASM-SLA   METALLURGICAL LITERATURE CLASSIFICATION

Corrosion of Metals During Chlorination of Toluene. Z. N. Suirkin and
E. E. Pugachev (*Anilinokrasochnaya Promishlennost*, 1935, 5, 162 167;
C. Abs., 1936, 30, 7528). [In Russian.] Corrosion increases in the series
chromium, Monel metal, iron-chromium, chromium steel, Aterite, lead, lead-
tellurium, lead antimony; considerable formation of tarry products is
observed in all cases except those of lead, Monel metal, and iron chromium.
—S. G.

L 9260-66   EWP(e)/EWT(m)/EWP(b)   WH

ACC NR: AP5022711   SOURCE CODE: UR/0181/65/007/009/2717/2722

AUTHOR: Vitman, F. F.; Pugachev, G. S.; Pukh, V. P.

ORG: Physicotechnical Institute im. A. F. Ioffe AN SSSR, Leningrad (Fiziko-tekhni-cheskiy institut AN SSSR)

TITLE: Safety factors and variation in the strength of plate glass

SOURCE: Fizika tverdogo tela, v. 7, no. 9, 1965, 2717-2722

TOPIC TAGS: sheet glass, high strength glass

ABSTRACT: It is shown that the values given in the literature for the strength of plate glass etched in hydrofluoric acid solutions are underestimated because insufficient attention is paid to possible accidental damage to the glass surface which may take place both before testing and while the glass is in the test installation. To verify this fact, special precautions are taken in testing the strength of glass after etching to see that damage to the surface is scrupulously avoided. A comparison with control experiments shows that the level of strength and dispersion in values observed in earlier experiments were due more to side factors than to the properties of the etched glass. The experimental data show that the guaranteed minimum values for the strength of the etched glass may be more than 100 kg·mm^{-2}. When precautions are taken to avoid handling of the glass in any way after etching, ordinary window

Card 1/2

L 9260-66

ACC NR: AP5022711

glass shows an average bending strength of ~250 kg·mm^{-2} with a much narrower spread in experimental values than previously observed. Measurements made in a dry vacuum to eliminate the effect of ambient humidity showed a more than double increase in strength. The experimental observations show that high strength is a property inherent in amorphous solids. It is suggested that the problem of producing high-strength glass may be solved not so much by developing methods for strengthening glass as by seeking ways to protect it from being weakened, since it is already in a super-strong state in its natural form. Orig. art. has: 1 figure, 1 table.

SUB CODE: 11/   SUBM DATE: 31Mar65/   ORIG REF: 022/   OTH REF: 003

Card 2/2

.., doktor fizika-matem. nauk; _____, G.S., kand. tekhn. nauk;
..., V.F., kand. tekhn. nauk

... natural strength of sheet glass. Stek. i ker. 22 no.9:12-14
S '65.
1. Fiziko-tekhnicheskiy institut imeni Ioffe AN SSSR.

(MIRA 18:9)

BAYKOVA, L.G.; VITMAN, F.F.; PUGACHEV, G.S.; PUKH, V.P.

High-strength state of glass. Dokl. AN SSSR 163 no.3:617-620 Jl '65.

1. Fiziko-tekhnicheskiy institut im. A.F.Ioffe AN SSSR. Submitted
January 18, 1965.   (MIRA 18:7)

L 5229-66   EWP(e)/EWT(m)/EWP(i)/EWP(b)   WH

ACC NR: AP5026038   SOURCE CODE: UR/0072/65/000/009/00ıʑ.

AUTHOR: Vitman, F. F. (Doctor of physico-mathematical sciences); Pugachev, G. S.;
Pukh, V. P. (Candidate of technical sciences)

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR (Fiziko-tekhnicheskiy institut
AN SSSR)

TITLE: Natural high strength of sheet glass

SOURCE: Steklo i keramika, no. 9, 1965, 12-14

TOPIC TAGS: sheet glass, glass property, hydrofluoric acid

ABSTRACT: Measurements of the strength of various parts of window glass before and after
etching with hydrofluoric acid showed a great scatter of values (10—160 kg/mm2 for etched
glass). Measurements made after steps were taken to protect the etched surface from new
flaws show that glassses reinforced by etching, i.e, freed from inherent and acquired sur-
face defects, manifest their actual high-strength state if no accumulation of random damage
is allowed to occur prior to and during the test. The observations lead to the important
conclusion that the structural state of massive glass is in no way stronger than the state of
glass fibers or drawn rods. Orig. art. has: 1 figure.

SUB CODE: MT   / SUBM Date: 00 / ORIG REF: 011 / OTH REF: 001

Card   1/1

                                           UDC: 666.11.01:620.172

VITMAN, F.F.; IOFFE, B.S.; PUGACHEV, G.S.

Penetration of short stress impulses from rigid to plastic rods.
Fiz. met. i metalloved. 10 no.3:435-444 S '60.   (MIRA 13:10)

1. Fiziko-tekhnicheskiy institut AN SSSR.
    (Strains and stresses)   (Elastic waves)

L 1656-66   EWT(m)/EWP(e)/EWP(i)/EWP(b)   WH

AUTHOR: Baykova, L. G.; Vitman, F. F.; Pugachev, G. S.;Pukh, V. P.

TITLE: The high-strength state of glass

TOPIC TAGS: glass property, high strength glass, hardening

ABSTRACT: The authors examine the reasons for the spread in individual strength
values for glass hardened by various thermal and chemical methods. It is assumed
that the high strength observed in certain specimens from a single batch of glass
is not an accident, and that this high strength would show up in the majority of
the glass specimens if it were not for strong suppressing side factors. These sup-
pressing effects are attributed chiefly to atmospheric humidity and to possible
damage of the glass during installation in the testing equipment. To test this hy-
pothesis, experiments are conducted in which the glass is protected from harmful
factors from the moment hardening is started. Strength measurements show that
these precautions raised the minimum strength level noticeably in the scatter zone.
However, it was found that weakening influences were not completely eliminated.

Card 1/2

L 1656-66

ACCESSION NR: AP5019427

Samples were then selected which were free from visible surface defects. This precaution further narrowed the scatter region and consequently increased the average strength of the batch of glass samples tested. Similar tests conducted with various types of glass hardened by various methods show analogous results. These experiments indicate that super-high-strength glass can be produced by finding practical ways to eliminate the weakening factors. It is recommended that further research should be done to determine just what these harmful factors are. Orig. art. has: 2 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR (Physicotechnical Institute, Academy of Sciences SSSR)

SUBMITTED: 27Nov64   ENCL: 00   SUB CODE: MT

NO REF SOV: 017   OTHER: 001

Card 2/2

PUGACHEV, I.

New merchandise at the Leipzig Fair in the fall of 1958. Sov.
torg. no.1:47-55 Ja '59.   (MIRA 12:2)
(Leipzig--Fairs)

PUGACHEV, I.A.

Practices of the textile industry in the German Democratic
Republic. Tekst. prom. 19 no.7:79-83 Jl '59.

(MIRA 12:11)

(Germany, East--Textile industry)

PUGACHEV, I.I.; STEPANOV, L.P.

    Hydrostatic bell. Trudy VNIIM no.22:113-116 '54.   (MIRA 10:12)
            (Manometer)   (Hydrostatics--Measurement)

PUGACHEV, I.N., inzhener; TUSHNYAKOV, M.D., inzhener.

"Reference book for construction crew mechanics." P.A.Zimin,
editor. Reviewed by I.N.Pugachev, M.D.Tushniakov. Mekh.stroi.
13 no.4:3 of cover Ap '56.   (MIRA 9:7)
(Building machinery)

Pugachev   L. I.
2(7)

SOV/19-59-3-272/306

AUTHOR: Pugachev, L.I.

TITLE: A Hammerless Double-Barrel Hunting Gun

PERIODICAL: Byulleten' izobreteniy, 1959, Nr 3, pp 64-65 (USSR)

ABSTRACT: Class 72a, 16_{03}. Nr 118049 (579677 of 29 June 1957).
             1) A gun as in title, of simplified design, with
             a spring-loaded rod for pulling up and releasing
             the hammer used for each barrel. The rod inter-
             acts with a lever pusher mounted in the fore-stock,
             turning when the gun is reloaded. 2) The gun has
             a semi-automatic safety lock for reliable fixing
             of the hammers in the cocked position. 3) The
             trigger hooks are spring loaded in reverse direc-
             tion, to protect the finger from recoil, as well
             as to simplify the assembling.

Card 1/1

PUGACHEV, M.G.

Essential oils. Khim.v shkole 14 no.5:73-76 S-O '59.
(MIRA 12:12)

1. Pedagogicheskiy institut, g.Tyumen'.
(Essences and essential oils)

LOPATIN, A.I.; LUGACHEV, M.G.; TIMOFEEV, Sr.S.; TRET'YAKOV, L.I.;
TUKAMPETOV, F.U.

Effect of growth-promoting substances from petroleum on the
growth of fodder yeast. Izv. AN Kazakh. SSR. Ser. khim. nauk
15 no.1:89-93 Ja-Mr '65.   (MIRA 18:12)

1. Submitted May 9, 1964.

GORYAYEV, M.I.; TRET'YAKOV, L.I.; PUGACHEV, M.G.

Amino acid composition of fodder yeasts obtained by low frequency
vibration. Izv.AN Kazak! SSR. Ser.khim.nauk no.1:71-77
'63. (MIRA 17:3)

GORYAYEV, M.I.; PUGACHEV, M.G.

Study of the essential oil from wormwood Artemisia transiliensis.
Zhur.ob.khim. 25 no.1:172-177 Ja '55.   (MIRA 8:4)

1. Akademiya nauk Kazakhskoy SSR.
    (Essences and essential oils) (Wormwood)

Puqachev   M. G.

Essential oil of Artemisia transiliensis. M. I. Goryaev and M. G. Pugachev. Zhur. Obshchel Khim. 25, 172-7; J. Gen. Chem. (U.S.S.R.) 25, 155-9(1955)(Engl. translation).—Steam distn. of the upper parts of the plant gave 0.40% yield of an essential oil, while the aq. distillate yielded a further 0.09% yield of a somewhat different oil. The former oil, d_{23}^{23} 0.9306, n_{D}^{20} 1.4670, $[\alpha]_{D}^{15}$ 12.3°, has a bitter taste and contains 0.01% HCO$_2$H, iso-PrCO$_2$H 0.086%, m-cresol 1.5%, α-pinene trace, cineole 55-6%, thujyl alc. 4-5%, esters of this alc. 6-7%, cumaldehyde 7.6%, thujone 14-17.5%, and an unidentified sesquiterpene alc. The second fraction of the oil contains 12.3% HCO$_2$H, 27.27% iso-PrCO$_2$H, 56.7% phenols, and 5.2% cineole.

G. M. Kosolapoff

GORYAYEV, M.I.; PYGYREV, N.S., ..., F.A.

Polarographic method for the determination of furfurole an
hydrogenation products. Izv. AN Kazakh. SSR. Ser. khim.
nauk 14 no.1:91-94 Ja-Mr '64.   (MIRA 18:3)

PUGACHEV, M. G.

Ethereal oil of Artemisia santolinoflia. M. I. Goryaev, G. K. Kruglykhina, M. G. Pugachev, and I. M. Shabanov. *Isvest. Akad. Nauk Kazakh. S.S.R., Ser. Khim.* 1956, No. 9, 33–42.—The oil contains carbonyl compds. (mainly thujone and some fenchone) 30, camphor 3.7, free alcs. (mainly composed of thujyl alc., 2.3% borneol, and some fenchyl alc.) 13.2, esters 10.24, cineole 1, org. acids (HCO_2H and isovaleric acid) 8, phenols (mainly $p\text{-}MeC_6H_4OH$) 9%, and unidentified terpenes and azulene-forming sesquiterpenes. A qual. test for aldehydes was found.   G. M. K.

PUGACHEV, M. G.

Essential oil of Dracocephalum stamineum. M. I. Goryaev, M. G. Pugachev, and I. M. Shabanov. *Izvest. Akad. Nauk Kazakh. S.S.R., Ser. Khim.* 1956, No. 9, 55-60.—The oil contains citral 34.13, neral 11.6, free geraniol 22, geraniol in the form of esters 13.35, azulenes 1-2%, and traces of linalool.   G. M. Kosolapoff

GORYAYEV, M.I.; PUGACHEV, M.G.; TRET'YAKOV, L.I.; POPOV, A.P.; KORNILOVA,
G.P.; IBRAYEV, G.Zh.; TUREBEKOV, Sh.S.; SAKMAN, N.E.

Preparation of fodder yeasts from molasses waste of the Dzhambul
Alcohol and Vodka Combine. Izv. AN Kazakh. SSR.Ser.khim.nauk 15
no.2:77-82 Ap-Je '65.   (MIRA 18:9)

PUGACHEV, N.

Phamphlet on the mechanization of operations requiring a great
expenditure of labor in packing flour and groats (Mechanization
of operations requiring a great expenditure of labor in packing
sections of mills and groats plants" by N.A. Govorov. Reviewed
by N. Pugachev). Muk.-elev.prom. 23 no.3:31 Mr '57.   (MLRA 10:5)

1. Mel'nichnyy kombinat im. S.M. Kirova.
                (Grain milling)
                   (Govorov, N.A.)

VALOV, I.; PUGACHEV, N.

Book on the installation of flour mills ("Installation of flour mills" by I.F. Ugolik, S.G.Ostrozetser and B.G. Ostrozetser. Reviewed by I.Valov and N. Pugachev). Muk. -elev.prom.22 no.11:3 of cover N'56.

(MIRA 10:1)

1. Leningradskiy mel'nichnyy kombinat imeni S.M. Kirova.
(Flour mills)
(Ugolik, I.F.) (Ostrozetser, S.G.) (Ostrozetser, B.G.)

VALOV, I.; PUGACHEV, N.

Book on the installation of flour mills ("Installation of flour mills" by I.F. Ugolik, S.G. Ostrozetser and B.G. Ostrozetser. Reviewed by I.Valov and N. Pugachev). Muk. -elev.prom.22 no.11:3 of cover N'56.

(MIRA 10:1)

1. Leningradskiy mel'nichnyy kombinat imeni S.M. Kirova.
(Flour mills)
(Ugolik, I.F.) (Ostrozetser, S.G.) (Ostrozetser, B.G.)

SREDIN, Viktor Vladimirovich; TARASENKOV, Petr Mikhaylovich;
     PUGACHEV, N.A., nauchnyy red.; DESHALYT, M.G., ved.
     red.; YASHCHURZHINSKAYA, A.B., tekhn. red.

[Equipment and pipes for catalytic reforming and hydrofining
plants] Oborudovanie i truboprovody ustanovok kataliticheskogo
riforminga i gidroochistki. Leningrad, Gostoptekhizdat, 1963.
237 p.   (MIRA 16:6)
          (Petroleum refineries--Equipment and supplies)

IOFFE, Veniamin Borisovich; PUGACHEV, N.A., nauchnyy red.; DOLMATOV,
    P.S., vedushchiy red.; YASHCHURZHINSKAYA, A.B., tekhn.red.

[Fundamentals of hydrogen production] Osnovy proizvodstva
vodoroda. Leningrad, Gos.nauchno-tekhn.izd-vo neft. i gorno-
toplivnoi lit-ry, Leningr.otd-nie, 1960. 429 p.   (MIRA 13:2)
                        (Hydrogen)

ZHUNKO, Vladimir Ivanovich; LAZHENITSYN, Yuriy Borisovich; PUGACHEV, N.A.,
     redaktor; MOLOKOVA, Ye.I., redaktor; SOKOLOVA, Ye.V., tekhnicheskiy
     redaktor.

[Principles of the heat treatment of fuel] Osnovy termicheskoi
pererabotki topliva. Leningrad, Gos. nauchno-tekhn. izd-vo neftianoi
i gornotoplivnoi lit-ry, Leningradskoe otd-nie, 1954. 338 p.
          (Fuel)   (MIRA 7:11)

PUGACHEV, N. I.

"Experiment in the Operation of Tibar Emitters in certain Washing Liquids"

report presented at the 13th Scientific Technical Conference of the Kuybyshev
Aviation Institute, March 1959.

LIVSHITS, N.A.; PUGACHEV, V.N.; IVANUSHKO, N.D., red.; BELYAYEVA,
V.V., tekhn. red.

[Probability methods for the analysis of automatic control
systems] Veroiatnostnyi analiz sistem avtomaticheskogo
upravleniia. Moskva, Izd-vo "Sovetskoe radio," Vol.1.Proba-
bility and statistical characteristics of disturbances and
processes. Linear steady-state and nonstationary systems]
Veroiatnostnye i statisticheskie kharakteristiki vozdeiotvii
i protsessov. Lineinye statsionarnye i nestatsionarnye si-
stemy. 1963. 895 p.   (MIRA 16:7)
          (Automatic control)

PUGACHEV, N.S.

Aviatsionnye dvigatelil   Moskva, Izd. VVIA im. N.E. Zhukovskogo, 1948.   323 p., digars.

Bibliography: p.320-321.

Title tr.: Aircraft engines.

                                        TL701. P84

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955

SHMELEV, A. A.

Airplane motors (Moskva) Izd. VVIA im. N. E. Zhukovskogo, 1948.   247 p. (49-25461)

TL701.P54

MATYUSHENKO, N.N.; VERKHOROBIN, L.F.; PUGACHEV, N.S.; SIVOKON', N.V.

Crystalline structure of higher beryllides of molybdenum, tungsten, and rhenium. Kristallografiia 7 no.6:862-864 N-D '62.   (MIRA 16:4)

1. Fiziko-tekhnicheskiy institut AN UkrSSR.
   (Beryllium compounds)   (Crystallography)

PUGACHEV, N.S.

2

S/126/62/013/001/006/018
E021/E580

AUTHORS: Verkhorobin, L.F., Ivanov, V.Ye., Matyushenko, N.N.,
Nechiporenko, Ye.P., Pugachev, N.S. and Somov, A.1.

TITLE: Diffusion reactions in the Mo-Si, W-Si and Ta-Si
systems

PERIODICAL: Fizika metallov i metallovedeniye, v.13, no.1, 1962,
77-81

TEXT: The processes occurring during the saturation of
molybdenum, tungsten and tantalum by silicon on thermal diffusion
were studied. Metallic samples were heated in silicon powder in
a vacuum of 10^{-5} mm mercury in the range 1150-1350°C.   The
silicide layer, formed on the surface of the metals, was examined
by metallographic and X-ray analysis. The results showed that the
saturated layer was produced, in the main, through the vapour
phase. The first stage was the formation of lower silicides.
Afterwards, higher silicides are formed. At 1240°C, the
disilicide appears after 0.5, 1 and 3 hours on W, Ta and Mo,
respectively. Once the disilicide has appeared, further growth
occurs largely by this phase, and only after a definite thickness
has been attained is there a retardation in growth of disilicide
Card 1/2

Diffusion reactions in the ...   S/126/62/013/001/006/018
                                        E021/E580

and increased growth in the layers of lower silicide. It was
shown from X-ray analysis and from the change in form of the
samples during diffusion that preferential diffusion of silicon
through the silicide layer occurred, and the reaction leading to
the formation of the phase takes place mainly at the internal
boundary of the layer. There are 5 figures and 2 tables.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UkrSSR
                (Physico-technical Institute AS UkrSSR)

SUBMITTED: April 25, 1961

Card 2/2

L 23586-66   EWT(m)/EWP(e)/ETC(f)/EWG(m)   JD/JG/AT/WH

ACC NR: AP6012773   SOURCE CODE: UR/0226/66/000/004/0061/0064

AUTHOR: Matyushenko, N. N.; Rozen, A. A.; Pugachev, N. S.

ORG: Kharkov Physicotechnical Institute, AN UkrSSR (Khar'kovskiy fiziko-tekhnicheskiy institut AN USSR)

TITLE: Triangulation of the system C-Si-Be

SOURCE: Poroshkovaya metallurgiya, no. 4, 1966, 61-64

TOPIC TAGS: silicon carbide, ternary system, carborundum, beryllium

ABSTRACT: The ternary system C-Si-Be is triangulated by studying the interaction between carborundum and beryllium. The interaction product is a mixture of silicon and beryllium carbide (CBe_2). The polythermal sections $Si-CBe_2$ and CBe_2-SiC are quasibinary systems. There is no liquid eutectic in system $Si-CBe_2$ close to $1400C$. Orig. art. has: 3 figures and 2 tables. [Based on author's abstract]   [AM]

SUB CODE: 07, 11/   SUBM DATE: 22Jun65/ ORIG REF: 007/ OTH REF: 002/

Card 1/1

S/070/62/007/006/005/020
E132/E435

AUTHORS: Matyushenko, N.N., Verkhorobin, L.F., Pugachev, N.S.,
            Sivokon', N.V.

TITLE: The crystal structures of the higher beryllides of
            molybdenum, tungsten and rhenium

PERIODICAL: Kristallografiya, v.7, no.6, 1962, 862-864

TEXT: The highest beryllides of Mo, W and Re were made by
allowing refined beryllium to diffuse at above 1100°C into these
metals until saturation was reached.   Sectioning a foil
incompletely saturated showed distinct layers corresponding to
$Mo-MoBe_2-MoBe_{12}-MoBe_{22}$.   A foil of Mo, 0.2 mm thick, was
completely saturated.   X-ray powder photographs were taken
(spacings tabulated) and corresponded to a cubic structure with
a = 11.63 (Mo),   11.63 (W) and   11.54 Å (Re).   Chemical analysis
gave a formula $MoBe_{22}$.   A structure with the space group
O_h^7 = Fd3m was proposed having 8Mo in (b),   16Be in (c),   16Be
in (d),   48Be in (f) and 96Be in (h) positions.   Observed and
calculated structure factors were compared for the assumed
parameters x (Be in f) = 0.125 and x (Be in h) = 0.   After
Card 1/2

The crystal structures ...

S/070/62/007/006/005/020
E132/E435

the study it was found that the structure was like that of
$ZrZn_{22}$ (Sten Samson. Acta crystallogr., v.14, no.12, 1961, 1229).
The volume of the unit cell is substantially identical with the
sum of the volumes of the component metals. There are 1 figure
and 2 tables.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UkrSSR
             (Physicotechnical Institute AS UkrSSR)

SUBMITTED: November 28, 1961

Card 2/2

VERKHOROBIN, L.F.; IVANOV, V.Ye.; MATYUSHENKO, N.N.; NECHIPORENKO, Ye.P.;
    PUGACHEV, N.S.; SOMOV, A.I.

    Reaction diffusion in systems Mo - Si, W - Si, and Ta - Si. Fiz.
    met.i metalloved. 13 no.1:77-81 Ja '62.   (MIRA 15:3)

    1. Fiziko-tekhnicheskiy institut AN USSR.
                    (Silicides) (Diffusion)

BOL'SHAKOV, A., dotsent; PUGACHEV, P.; AKISHINA, Ye.

    Physicomechanical requirements for artificial sausage casings.
    Mias.ind. SSSR 34 no.3:52-55 '63.   (MIRA 16:7)

    1. Moskovskiy tekhnologicheskiy institut myasnoy i molochnoy pro-
    myshlennosti.

L 07579-67

ACC NR: AP6006554   (A)   SOURCE CODE: UR/0335/65/000/005/0012/0014

AUTHOR: Shtenborg, A. (Professor); Yurin, V.; Pugachev, P.

ORG: [Shtenborg] Nutrition Institute, AMN SSSR (Institut pitaniya AMN SSSR); [Yurin]
Moscow Institute of Hygiene im. F. F. Erisman (Moskovskiy institut gigiyeny);
[Pugachev] Moscow Technological Institute of the Meat and Dairy Industry (Moskovskiy
tekhnologicheskiy institut myasnoy i molochnoy promyshlennosti)

TITLE: PE-500 polyethylene for packaging meat products

SOURCE: Myasnaya industriya SSSR, no. 5, 1965, 12-14

TOPIC TAGS: resin, polyethylene plastic, food technology, processed animal product,
packing material, polyethylene / PE-500 polyethylene

ABSTRACT: Of the polyethylenes tested only the resin of polyethylene PE-500 was
found to be suitable for packaging meat products. Wrappers 50 and 100 microns in
thickness, bottles, and flasks prepared from PE-500 polyethylene were tested on 75%
saccharose, 40% ethyl alcohol, 22% sodium chloride, and 2% acetic acid solutions, as
well as on acidified and alkalized physiological solutions, hot water, and cold water.
The experimental results show that 1) the packaging material exposed to the simulated
food samples for 30 days does not change its appearance, 2) the simulated food samples
do not show any visible changes in color or transparency, 3) most of the simulated

UDC 678.742:637.52.004.3

Card 1/2

L 07579-67

ACC NR: AP6006554   0

food samples in the bottle and flasks develop a strange odor and taste after a period
of 3 and 7 days which becomes more pronounced with the prolongation of the contact
time, 4) this phenomenon does not appear in samples enveloped in wrappers, 4) some low
molecular weight compounds pass from the packaging material into the food samples
after a contact time of 7 and 14 days, and 5) PE-500 polyethylene powder injected in
animals for 8 months do not change their general condition. Sealed bags 10 x 20 cm in
size prepared from the 50 and 100 micron wrapping material were tested on pork, beef,
half-smoked sausage, lard, and other meat products and the results compared with those
obtained from packaging similar food samples in glass jars. The test data lead to the
conclusion that PE-500 polyethylene has good prospects as a packaging material for
meat products. It is suggested that the polyethylene wrapping material be used in the
main for wrapping meat products and the bottles and flasks be limited to packaging dry
products. It is also suggested that meat products with a low fat content be packaged
in the polyethylene packaging material for storing at temperatures higher than 4 C.

SUB CODE: 11, 08/   SUBM DATE: none

Card 2/2

ACC NR: AP7000677   (A)   SOURCE CODE: UR/0066/66/000/011/ 7/0040

AUTHORS: Smol'skiy, N. T.; Pugachov, P. I.; Belyayev, V. M.

ORG: /Smol'skiy/ Moscow Institute of National Economy im. G. V. Plekhanov
(Moskovskiy institut narodnogo khozyaystva); /Pugachev/ All Union Scientific Research
Institute of Poultry Processing Industry (Vsesoyuznyy nauchno-issledovatel'skiy
institut ptitsepererabatyvayushchey promyshlennosti); /Belyayev/ Moscow Technological
Institute of Meat and Dairy Industry (Moskovskiy tekhnologicheskiy institut myasnoy
i molochnoy promyshlennosti)

TITLE: Packing and storage of beef in film-type materials

SOURCE: Kholodil'naya tekhnika, no. 11, 1966, 37-40
                packing material,
TOPIC TAGS: food preservation, polyethylene, cellophane, cellulose plastic /
PE-500 VD polyethylene, TsP-1 cellophane-polyethylene

ABSTRACT: The following films have been tested as packing and storing materials
preventing the loss of color, moisture, and freshness of beef: 0.05-mm VD poly-
ethylene PE-500; 0.07-mm cellophane-polyethylene TsP-1; and 0.04—mm cellophane.
The meat specimens from three- and four-year old animals (weighing 325—350 kg) were
held (at 2—3C) for 3 days after slaughter. The specimens were stored at 4—6C and
at 65—70% relative humidity for 3, 5, 7, and 9 days. At this time the following
parameters were measured: freshness (according to GOST 7269-54), moisture content

Card 1/2   UDC: 637.5.004.4:678.742.2

ACC NR: AP7000677

of the external and internal layers, pH, condition of the broth after boiling, shrinkage, amount of separated juices, and bacterial content of the external and internal layers. It was established that the most suitable of the investigated materials is polyethylene film because it retains the desirable appearance, freshness and food qualities of the meat. Orig. art. has: 5 tables.

SUB CODE: 06,13/SUBM DATE: none

Card 2/2

ISHUKOV, V.P., starshiy nauchnyy sotrudnik; PUGACHEV, P.I., inzh.;
    SHIBANOVA, V.A., inzh.

    Changes occurring during storage in the proteins and fats of
    poultry meat dehydrated by sublimation. Trudy TSNIIPPa 9:
    18-22 '62.   (MIRA 16:6)

            (Meat, Dried---Analysis)

PUGACHEV, P.I.; SHABANOVA, V.A.

Protein changes during storage in the white chicken meat hydrated
by sublimation drying. Izv.vys.ucheb.zav.; pishch. tekh. no.6:85-
87 '61.   (MIRA 15:2)

1. Moskovskiy tekhnologicheskiy institut myasnoy i molochnoy
promyshlennosti, kafedra tekhnologii myasa i myasoptichnykh
produktov.
                        (Poultry—Storage)

BERLIN, A.A.; PAVLOV, D.V.; PUGACHEV, P.I.

Protective film coatings for meat products. Izv.vys.ucheb.zav.;
pishch.tekh. no.5:68-73 '58.   (MIRA 11:12)

1. Moskovskiy tekhnologicheskiy institut myasnoy i molochnoy
promyshlennosti, kafedra tekhnologii myasa, kafedra fiziche-
skoy i kolloidnoy khimii;
     (Packing house products) (Protective coatings)

PUGACHEV, V.A., inzh.

The PZG-3 paste-making machine, Trakt. i sel'khozmash. 33
no.3:34-35 Mr '63.   (MIRA 16:11)

1. Proyektno-konstruktorskiy tekhnologicheskiy institut
Moldavskogo soveta narodnogo khozyaystva, g. Kishinev.

ACC NR: AP6001944   (A)   SOURCE CODE: UR/0330/65/000/010/0015/0019

AUTHOR: Pugachev, V. A. (Engineer); Mekhanikov, A. M. (Engineer)

ORG: Moldavian Scientific Research Institute of Food Industry (Moldavskiy nauchno-issledovatel'skiy institut pishchevoy promyshlennosti)

TITLE: Infrared lamp continuous drier NSL-2

SOURCE: Konservnaya i ovoshchesushil'naya promyshlennost', no. 10, 1965, 15-19

TOPIC TAGS: IR lamp, industrial drier, food technology

ABSTRACT: A new infrared lamp continuous drier for drying grape seeds, racemic acids and other materials used in wine making is described. The advantages of this drier compared to steam and flame drier types include high efficiency (60 to 65%), light weight (300 kg), small overall dimensions, wide range of temperature conditions, and easy installation in any building. Orig. art. has: 2 figures.
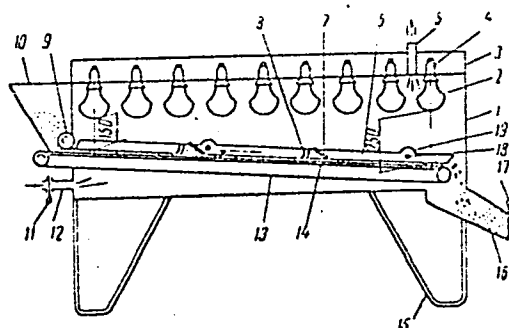
Card 1/2

UDC: 664.8.036.539

ACC NR: AP6001944

Figure 2. Basic diagram of an NSL-2 drier.

1--frame, 2--infrared lamps, 3--sockets, 4--mesh cover,
5--connecting pipes, 6--side boards, 7--equalizer,
8--forked agitator, 9--straightening roller, 10--hopper,
11--gate, 12--connecting pipe, 13--conveyor belt, 14--guides,
15--legs, 16--output hopper, 17--closing fastener,
18--heat sensors, 19--reflectors.

SUB CODE: 06, 13/ SUBM DATE: none

Card 2/2

L 46013-66   EWT(1)

ACC NR: AP6030581   SOURCE CODE: UR/0413/66/000/016/0064/0064

INVENTOR: Dombur, L. E.; Pugachev, V. A.; Sika, Z. K.

ORG: none

TITLE: A two-pack inductor machine. Class 21, No. 184963

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 16, 1966, 64

TOPIC TAGS: inductor machine, resultant field, excitation winding

ABSTRACT: The proposed two-pack inductor is excited from a ring coil placed between the packs of the stator and utilizes a windingless two-pack rotor. To decrease excitation winding power and improve resultant field curve, the packs of the rotor are designed with claw-like poles and contain permanent ring magnets. The latter are oriented in such a manner that each of these packs forms a variable pole system. Orig. art. has: 1 figure. [Translation]   [DW]

Card 1/2   UDC: 621.313.392

L 46017-66

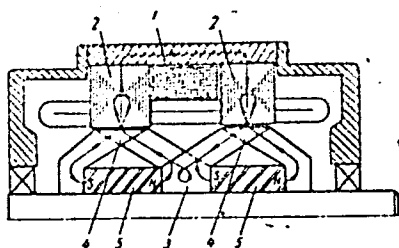ACC NR: AP6030581   0

Fig. 1. Two-pack inductor.
          1—Ring coil; 2—stator packs;
          3—two-pack rotor; 4—claw-like
          poles; 5—permanent ring mag-
          nets

SUB CODE: 09/ SUBM DATE: 18Feb65/

Card 2/2

ESTEROV, Ya.Kh., inzh.; PUGACHEV, V.I., inzh.

Practices in blasting holes on steep slopes. Transp.stroi.
14 no.12:6-7 D '64.
(MIRA 19:1)

PUGACHEV, V.I., gornyy inzh.

    Blasting boreholes in cohesive soils. Trans. stroi. 13 no.12:
    59-60 D'63   (MIRA 17:7)

SAVEL'YEV, V.P. kand.tekhn.nauk; SHEMATOVICH, V.V., kand.tekhn.nauk
    PRUZHININA, V.I., kand.tekhn.nauk; PUGACHEV, V.K., inzh.

Combination magnetic-valve discharger for 500 kv. voltages.
Elektrichestvo no.4:13-20 Ap '61.   (MIRA 14:8)

1. Vsesoyuznyy elektrotekhnicheskiy institut imeni Lenina.
       (Electric protection)

AM4008918   BOOK EXPLOITATION   S/

Livshits, M. A.; Pugachev, V. N.

Probability analysis of automatic control systems. v. 2: Nonlinear systems.
    Systems of discrete operation (Veroyatnostny*y analiz sistem avtomaticheskogo
    upravleniya. [t.] 2: Nelineyny*ye sistemy*. Sistemy* diskretnogo deystviya)
    Moscow, "Sovetskoye radio," 63. 0482 p. illus., biblio., index. 12,000 copies
    printed.

TOPIC TAGS: automation, probabliity, automatic control, analog automatic control,
digital automatic control, nonlinear system, digital system, random process, non-
linear static element, nonlinear dynamic element, probability analysis, system
accuracy, pulsed element, digital element

PURPOSE AND COVERAGE: The book presents a systematic treatise of probability
analysis of nonlinear and discrete automatic control systems, random processes in
nonlinear static and dynamic analog elements and their characteristics, the princi-
pal engineering methods of probability analysis of random processes, and the
operating accuracy of nonlinear stationary and nonstationary analog systems.
Equations are also derived and the characteristics determined for linear and non-
linear pulsed and digital elements with constant parameters, and methods are shown

Card   1/3

AM4008918

for their calculation. A probability investigation is made of random processes and of the operating accuracy of linear and nonlinear digital systems with constant or variable parameters. The book contains many computation tables and graphs, examples, and summaries of formulas, so as to facilitate the solution of practical problems. The mathematical level is that of students in higher technical educational institutions. The book is intended for many scientific workers, engineers, and undergraduate or graduate students specializing in theory and technology of automatic control and automation. It may also be useful to telemechanics, radio, and radar specialists engaged in statistical research.

TABLE OF CONTENTS [abridged]:

Card 2/3

AM4008918

SUB CODE: CP, CG, MM   SUBMITTED: 29Jul63   NR REF SOV: 059

OTHER: 021   DATE ACQ: 14Nov63

Card   3/3

AM4006612   BOOK EXPLOITATION   S/

Livshits, N. A.; Pugachev, V. N.

Probability analysis of automatic control systems. V. 1: Probability
    and statistical characteristics of effects and processes. Linear
    stationary and nonstationary systems (Veroyatnostny*y analiz
    sistem avtomaticheskogo upravleniya. [t.] 1: Veroyatnostny*ye i
    statisticheskiye kharakteristiki vozdeystviy i protsessov. Liney*ye
    statsionarny*ye i nestatsionarny*ye sistemy*). Moscow, "Sovetskoye
    radio," 1963. 895 p. illus., biblio., index. 12,000 copies printed.

TOPIC TAGS: automatic control, control system probability analysis,
    random disturbance function, linear steady state control system,
    control system transient process

PURPOSE AND COVERAGE: This book is intended for a wide circle of
    scientific personnel, aspirants, engineers, and students in schools
    of higher education specializing in various branches of the theory
    and techniques of automatic control and industrial automation. It
    could also be useful to technical personnel specializing in tele-

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mechanics, radio engineering, or radar or concerned with statis-
tical problems. The book contains a systematic exposition of
probability methods for the analysis of automatic control systems.
This first volume deals with the probability and statistical char-
acteristics of random processes and with methods for their de-
termination and evaluation. The characteristics and probability
analysis of linear stationary and nonstationary systems and meth-
ods to determine the accuracy of their operation are discussed.
The characteristics of random processes occurring in these sys-
tems are being determined by the application to their arbitrary
inputs of any number of both stationary and nonstationary ran-
dom effects. The authors thank B. C. Dostupov and Ya. Z. Tsy*pkin
for their advice.

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Point A moves rectilinearly with constant velocity v.
Point B moves with constant velocity w so that the tangent
to its trajectory at any instant t is directed toward a point
C on the trajectory of A, with $AC = f(r)$, where $r = BC$.
If A is a moving target, B a pursuit plane with gun barrels
fixed parallel to its axis, V the velocity of the shell, and
if $f(r) = vr/(V+w)$, then C is the point toward which
B's axis must be continuously directed if B is to score a hit
on A at any instant of fire. An obvious pair of differential
equations for the coordinates of B with parameter t are
subjected to a transformation T whereby r and t become
new dependent variables with z, the negative cosine of B's
angle of approach to A's track, as the new parameter.
A mapping by T of the integral curves of the (r, z) differ-
ential equation in the neighborhood of a singular point
reveals the properties of the generalized pursuit curve as
$r \to 0$. $F. C. Doyle$ (Hanover, N. H.).

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